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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WANG, SHENGJUN

ART UNIT PAPER NUMBER

1617

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/987,380

Applicant(s)

INOUE ET AL.

Examiner

Shengjun Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,10,11,13 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,10,11,13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Receipt of applicants' remarks submitted December 3, 2004 is acknowledged.

Claims Rejections 35 U.S.C. - 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5 -7, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tocker (WO 91/10362 of record) in view of Burger et al. (WO 93/04017, CA 2115998 is an English equivalent) and Kogler et al. (US Patent 4,772,490, of record).

Tocker teaches a pesticidal granule composition coated with polyurethane. See, particularly, page 2, line 23-31. The polyols employed has at least two hydroxyl groups and the polyisocyanate has at least one isocyanate substituent (-NCO). See, particularly. Page 4, lines 1-30. The amount of polyisocyanate employed is about 1-20% by weight, and the reaction temperature is at ambient temperature or above. The coating procedure can be carried out stepwise. See, particularly, page 5, line 5-22. Tocker further teaches that, as required by some practice, e.g., slow release of the active component, monomers containing more isocyanate or hydroxyl group may be employed to increase the degree of cross-link in polyurethane. See, particularly, page 10, lines 16-24. The polyisocyanate employed therein are, for example, triisocyanato toluene, 1,5-naphthalene diisocyanate, etc. the polyols employed therein are, for example, glycerin, glycol or other polyhydric alcohols. See, particularly, page 4, lines 3-30.

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Tocker does not teach expressly the employment of the particular procedure herein for making the coating wherein the polyols and polyisocyanate are mixed before the application to the granules.

However, Burger et al. teach that the particular procedure herein, i.e., mixing the polyol and polyisocyanate before applying them to the granules, is known for coating agrochemical granules for forming multiple layers of polyurethane coating. The coating made by such procedure are known to be with sufficient homogeneity of the individual particle coating, and be physically stable, resistant to frost and provide sustained release of active ingredients. See, particularly, the abstract, page 1, the examples and the claims. Kogler et al. also teaches method of coating granular agrochemicals with polyurethane for controlled release of active ingredients, wherein polyisocyanate and polyols are premixed. See, particularly, the abstract, examples 2-5 in columns 5 and 6. The coating's properties may be manipulated by using different polyols and different isocyanates. See, particularly, column 2, line 49 bridging column 3, line 29.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to modify the pesticidal granules of Tocker by mixing the polyols and polyisocyanates first followed by coating the mixture to the granules.

A person of ordinary skill in the art would have been motivated to make such modification because the modification will lead to a stable, controlled releasing coating.

Regarding claims 5, 7, 10,11 and 13 which recited water absorption ratio of the polyurethane is not more than 5%, it is noted that the reference and the instant application are employing the essentially the same polyols and polyisocyanates. See, pages 13-14 in the specification and page 4 in Tocker. Therefore, the polyurethane coating of Tocker is reasonably

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expected to have the same water absorption ratio as claimed herein. Further, the optimization the properties of the coating accordingly by using different isocyanate or polyol is considered within the skill of artisan, as discussed by Tocker et al. (cross link degree) and Kolger et al. (different polyol and isocyanate).

Response to the Arguments

Applicants' remarks submitted December 3, 2004 have been fully considered, but are not persuasive for reasons discussed below.

2. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Particularly, in view of the cited references as a whole, the claimed method would have been obvious to one of ordinary skill in the art. Applicants have argued that Tucker et al. particular teach polyol in the granules therefore combination with other references to arrive the claimed invention would fundamentally change of Tucker's invention. The arguments are not persuasive. Applicants' attention is directed to "Background of the invention" in Tucker et al. wherein Tucker et al. disclosed that methods similar to those herein claimed are known in the art (i.e., using mixture of polyols and polyisocyanate), and state that the method therein is much more *versatile and convenient* than the known methods. See page 1-2. The method disclosed by Tucker et al. does not provide any advantage as to the properties. Burger and Kogler et al. teaches the method for improving the properties. Therefore, it would have been obvious to one of ordinary skill in the art to combined

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the cited references, and take any of the advantages disclosed in the prior art. It is noted that the claimed method may not be as convenient as those disclosed by Tucker et al. However, it has been held that "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994).

3. The examiner fails to find any evidence in the application supporting applicants' assertion that low water absorption ratio of polyurethane was superior, and those low water absorption property is independent from the polyurethane monomeric units.
4. For reasons discussed above, the rejections have been maintained and no claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang whose telephone number is (571) 272-0632. The examiner can normally be reached on Monday to Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHENGJUN WANG
PRIMARY EXAMINER

Shengjun Wang
Primary Examiner
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